

*Dob A1* >

SEQUENCE LISTING

<110> PODBIELSKI, ANDREAS

<120> COLLAGEN-BINDING PROTEINS FROM STREPTOCOCCUS PYOGENES

<130> P06628US0/BAS

<140> 00/000,000

<141> 2000-01-31

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<170> PatentIn Ver. 2.0

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<211> 2274

<212> DNA

<213> Streptococcus pyogenes

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<211> 757

<212> PRT

<213> **Streptococcus pyogenes**

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35 40 45

Thr Val Phe Gly Leu Val Glu Ser Ser Thr Pro Asn Ala Ile Asn Pro

50 55 60

Asp Ser Ser Ser Glu Tyr Arg Trp Tyr Gly Tyr Glu Ser Tyr Val Arg

65 70 75 80

Gly His Pro Tyr Tyr Lys Gln Phe Arg Val Ala His Asp Leu Arg Val

85 90 95

Asn Leu Glu Gly Ser Arg Ser Tyr Gln Val Tyr Cys Phe Asn Leu Lys

100 105 110

Lys Ala Phe Pro Leu Gly Ser Asp Ser Ser Val Lys Lys Trp Tyr Lys

115                    120                    125

Lys His Asp Gly Ile Ser Thr Lys Phe Glu Asp Tyr Ala Met Ser Pro

130                    135                    140

Arg Ile Thr Gly Asp Glu Leu Asn Gln Lys Leu Arg Ala Val Met Tyr

145                    150                    155                    160

Asn Gly His Pro Gln Asn Ala Asn Gly Ile Met Glu Gly Leu Glu Pro

165                    170                    175

Leu Asn Ala Ile Arg Val Thr Gln Glu Ala Val Trp Tyr Tyr Ser Asp

180                    185                    190

Asn Ala Pro Ile Ser Asn Pro Asp Glu Ser Phe Lys Arg Glu Ser Glu

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Ser Asn Leu Val Ser Thr Ser Gln Leu Ser Leu Met Arg Gln Ala Leu

210                    215                    220

Lys Gln Leu Ile Asp Pro Asn Leu Ala Thr Lys Met Pro Lys Gln Val

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Pro Asp Asp Phe Gln Leu Ser Ile Phe Glu Ser Glu Asp Lys Gly Asp

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Thr Lys Pro Pro Thr Pro Gly Asp Pro Pro Met Pro Pro Asn Gln Pro

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Lys Leu Leu Glu Gly Ala Thr Leu Gln Leu Thr Gly Asp Asn Val Asn

305 310 315 320

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325 330 335

Glu Leu Ser Asp Gly Thr Tyr Thr Leu Thr Glu Leu Asn Ser Pro Ala

340 345 350

Gly Tyr Ser Ile Ala Glu Pro Ile Thr Phe Lys Val Glu Ala Gly Lys

355 360 365

Val Tyr Thr Ile Ile Asp Gly Lys Gln Ile Glu Asn Pro Asn Lys Glu

370 375 380

Ile Val Glu Pro Tyr Ser Val Glu Ala Tyr Asn Asp Phe Glu Glu Phe

385 390 395 400

Ser Val Leu Thr Thr Gln Asn Tyr Ala Lys Phe Tyr Tyr Ala Lys Asn

405 410 415

Lys Asn Gly Ser Ser Gln Val Val Tyr Cys Phe Asn Ala Asp Leu Lys

420 425 430

Ser Pro Pro Asp Ser Glu Asp Gly Gly Lys Thr Met Thr Pro Asp Phe

435 440 445

Thr Thr Gly Glu Val Lys Tyr Thr His Ile Ala Gly Arg Asp Leu Phe

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Lys Tyr Thr Val Lys Pro Arg Asp Thr Asp Pro Asp Thr Phe Leu Lys

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485 490 495

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500 505 510

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Val Ala Lys Ile Leu Val Glu Tyr Ala Gln Asp Ser Asn Pro Pro Gln

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Leu Thr Asp Leu Asp Phe Phe Ile Pro Asn Asn Asn Lys Tyr Gln Ser

565

570

575

Leu Ile Gly Thr Gln Trp His Pro Glu Asp Leu Val Asp Ile Ile Arg

580

585

590

Met Glu Asp Lys Lys Glu Val Ile Pro Val Thr His Asn Leu Thr Leu

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600

605

Arg Lys Thr Val Thr Gly Leu Ala Gly Asp Arg Thr Lys Asp Phe His

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615

620

Phe Glu Ile Glu Leu Lys Asn Asn Lys Gln Glu Leu Leu Ser Gln Thr

625

630

635

640

Val Lys Thr Asp Lys Thr Asn Leu Glu Phe Lys Asp Gly Lys Ala Thr

645

650

655

Ile Asn Leu Lys His Gly Glu Ser Leu Thr Leu Gln Gly Leu Pro Glu

660

665

670

Gly Tyr Ser Tyr Leu Val Lys Glu Thr Asp Ser Glu Gly Tyr Lys Val

675

680

685

Lys Val Asn Ser Gln Glu Val Ala Asn Ala Thr Val Ser Lys Thr Gly

690

695

700

Ile Thr Ser Asp Glu Thr Leu Ala Phe Glu Asn Asn Lys Glu Pro Val

705

710

715

720

Val Pro Thr Gly Val Asp Gln Lys Ile Asn Gly Tyr Leu Ala Leu Ile

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Val Ile Ala Gly Ile Ser Leu Gly Ile Trp Gly Ile His Thr Ile Arg

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Ile Arg Lys His Asp

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<212> DNA

<213> Streptococcus pyogenes

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<213> **Streptococcus pyogenes**

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25

30

Leu Ile Gly Ile Val Gly Phe Ser Ile Arg Ala Phe Gly Ala Glu Glu

35

40

45

Gln Ser Val Pro Asn Arg Gln Ser Ser Ile Gln Asp Tyr Pro Trp Tyr

50

55

60

Gly Tyr Asp Ser Tyr Pro Lys Gly Tyr Pro Asp Tyr Ser Pro Leu Lys

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Thr Tyr His Asn Leu Lys Val Asn Leu Glu Gly Ser Lys Asp Tyr Gln

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90

95

Ala Tyr Cys Phe Asn Leu Thr Lys His Phe Pro Ser Lys Ser Asp Ser

100

105

110

Val Arg Ser Gln Trp Tyr Lys Lys Leu Glu Gly Thr Asn Glu Asn Phe

115

120

125

Ile Lys Leu Ala Asp Lys Pro Arg Ile Glu Asp Gly Gln Leu Gln Gln

130

135

140

Asn Ile Leu Arg Ile Leu Tyr Asn Gly Tyr Pro Asn Asn Arg Asn Gly

145

150

155

160

Ile Met Lys Gly Ile Asp Pro Leu Asn Ala Ile Leu Val Thr Gln Asn

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170

175

Ala Ile Trp Tyr Thr Asp Ser Ala Gln Ile Asn Pro Asp Glu Ser Phe

180

185

190

Lys Thr Glu Ala Arg Ser Asn Gly Ile Asn Asp Gln Gln Leu Gly Leu

195

200

205

Met Arg Lys Ala Leu Lys Glu Leu Ile Asp Pro Asn Leu Gly Ser Lys

210

215

220

Tyr Ser Asn Lys Thr Pro Ser Gly Tyr Arg Leu Asn Val Phe Glu Ser

225

230

235

240

His Asp Lys Pro Phe Gln Asn Leu Leu Ser Ala Glu Tyr Val Pro Asp

245

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255

Thr Pro Pro Lys Pro Gly Glu Glu Pro Pro Ala Lys Thr Glu Lys Thr

260

265

270

Ser Val Ile Ile Arg Lys Tyr Ala Glu Gly Asp Ser Lys Leu Leu Glu

275

280

285

Gly Ala Thr Leu Lys Leu Ser Gln Ile Glu Gly Ser Gly Phe Gln Glu

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295

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Lys Asp Phe Gln Ser Asn Ser Leu Gly Glu Thr Val Glu Leu Pro Asn

305

310

315

320

Gly Thr Tyr Thr Leu Thr Glu Thr Ser Ser Pro Asp Gly Tyr Lys Ile

325

330

335

Ala Glu Pro Ile Lys Phe Arg Val Glu Asn Lys Lys Val Phe Ile Val

340

345

350

Gln Lys Asp Gly Ser Gln Val Glu Asn Pro Asn Lys Glu Val Ala Glu

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360

365

Pro Tyr Ser Val Glu Ala Tyr Asn Asp Phe Met Asp Glu Glu Val Leu

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380

Ser Gly Phe Thr Pro Tyr Gly Lys Phe Tyr Tyr Ala Thr Asn Lys Asp

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390

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400

Lys Ser Ser Gln Val Val Tyr Cys Phe Asn Ala Asp Leu His Ser Pro

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410

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Pro Asp Ser Tyr Asp Ser Gly Glu Thr Ile Asn Pro Asp Thr Ser Thr  
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Met Lys Glu Val Lys Tyr Thr His Thr Ala Gly Ser Asp Leu Phe Lys  
435 440 445

Tyr Ala Leu Arg Pro Arg Asp Thr Asn Pro Glu Asp Phe Leu Lys His  
450 455 460

Ile Lys Lys Val Ile Glu Lys Gly Tyr Lys Lys Lys Gly Asp Ser Tyr  
465 470 475 480

Asn Gly Leu Thr Glu Thr Gln Phe Arg Ala Ala Thr Gln Leu Ala Ile  
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Tyr Tyr Phe Thr Asp Ser Ala Asp Leu Lys Thr Leu Lys Thr Tyr Asn  
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Asn Gly Lys Gly Tyr His Gly Phe Glu Ser Met Asp Glu Lys Thr Leu  
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Arg Met Glu Asp Lys Lys Gln Glu Val Ile Pro Val Thr His Ser Leu  
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Pro Thr Gly Tyr Ser Tyr Thr Leu Lys Glu Ala Glu Ala Lys Asp Tyr  
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Lys Asp Ile Thr Glu Asp Lys Lys Val Thr Phe Glu Asn Arg Lys Asp  
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Leu Val Pro Pro Thr Gly Leu Thr Thr Asp Gly Ala Ile Tyr Leu Trp

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Leu Leu Leu Leu Val Pro Leu Gly Leu Leu Val Trp Leu Phe Gly Arg

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730

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Lys Gly Leu Lys Asn Asp

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